

AMENDMENT TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Currently Amended) A method, comprising:
receiving a first database;
forming a virtual schema including at least a portion of a dataset included within the first database;
receiving a first input indicating a criteria;
aggregating together data of the first database into one or more groupings, data from the first database, based at least in part upon a spatial component of the data, in accordance with the virtual schema and the first input indicating the criteria; and
displaying one or more indicators associated with the one or more groupings on an n-dimensional presentation.
2. (Original) The method of claim 1, further comprising:
receiving a second input indicating one or more regions;
storing the second input as a spatial-object meta data; and
aggregating the groupings based upon the spatial-object meta data.
3. (Original) The method of claim 2, further comprising:
displaying one or more indicators associated with the one or more groupings in a region associated therewith on an n-dimensional presentation.
4. (Original) The method of claim 2, wherein
the region comprises at least one of:
a polygon,
a circle,

a rectangle,
an ellipse, and
an animal home range.

5. (Original) The method of claim 2, wherein:
the second input indicating one or more regions comprises:
at least one of:
an input from a user,
a pre-determined area,
a derivation based upon one or more objects on the n-dimensional
presentation, and
a result of a computation.

6. (Original) The method of claim 5, wherein:
the pre-determined area comprises at least one of:
a zip code,
an area code,
a census tract,
a Metropolitan Statistical Area (MSA),
a nation state,
a state,
a county,
a municipality,
a latitude, and
a longitude.

7. (Original) The method of claim 5, wherein:
the derivation based upon one or more objects on the n-dimensional
presentation comprises:
a region within a specified distance of a power line.

8. (Original) The method of claim 5, wherein:
the result of a computation comprises:
computing an animal home range, the home range providing a region defined
by activities of a target;
defining within the region a first ellipse; and
defining within the region a second ellipse approximately orthogonal to the
first ellipse; wherein
an area defined by intersection of the first ellipse and the second ellipse
provides a greatest probability of finding the target.

9. (Original) The method of claim 8, wherein:
the target comprises at least one of:
a suspect, who perpetrated criminal acts defined by the data,
a customer, who completed transactions in shops defined by the data,
a source of biological material, which caused infections in persons defined by
the data.

10. (Original) The method of claim 2, wherein:
aggregating the groupings based upon the spatial-object meta data comprises:
checking whether data points fall within a common region, and
if so, aggregating data represented by the data points.

11. (Original) The method of claim 3, wherein:
the n-dimensional presentation comprises a map.

12. (Original) The method of claim 11, wherein:
displaying one or more indicators further comprises:
determining an x, y coordinate for each region on the map;
displaying at least one indicator associated with the one or more groupings on
the map at the x, y coordinate.

13. (Original) The method of claim 2, further comprising:
receiving a third input indicating a one or more redefined regions;
storing the third input as a redefined spatial-object meta data; and
aggregating into new groupings based upon the spatial-object meta data.

14. (Original) The method of claim 2, further comprising:
redefining the virtual schema based upon the spatial-object meta data.

15. (Original) The method of claim 14, wherein:
redefining the virtual schema based upon the spatial-object meta data
comprises:
receiving a third input indicating a criteria;
aggregating data of the database into one or more new groupings in
accordance with the redefined virtual schema and the third input
indicating the criteria; and
displaying one or more indicators associated with the one or more new
groupings on an n-dimensional presentation.

16. (Original) The method of claim 2, further comprising:
receiving a third input indicating a relationship between a first data point and
a second data point on the n-dimensional presentation;
reflecting the relationship in the virtual schema;
aggregating data of the database into one or more new groupings in
accordance with the virtual schema; and
displaying one or more indicators associated with the one or more new
groupings on an n-dimensional presentation.

17. (Original) The method of claim 1, further comprising:
receiving a second database;

forming a virtual schema including at least a portion of a dataset included within at least one of the first database and the second database; receiving a first input indicating a criteria; aggregating data of at least one of the first database and the second database into one or more groupings in accordance with the virtual schema and the first input indicating the criteria; and displaying one or more indicators associated with the one or more groupings on an n-dimensional presentation.

18. (Original) The method of claim 1, further comprising: generating code in accordance with the virtual schema.

19. (Original) The method of claim 1, further comprising: providing customer centric information to a core of customer data within the database in accordance with the virtual schema.

20. (Currently Amended) A method, comprising: receiving a first database; forming a virtual schema including at least a portion of a dataset included within the first database; receiving a first input indicating a criteria; receiving a second input indicating one or more regions; aggregating together data of the first database into one or more groupings, data from the first database, based at least in part upon a spatial component of the data, in accordance with the virtual schema, the first input indicating the criteria, and the second input indicating the one or more regions of interest; and displaying one or more indicators associated with the one or more groupings on an n-dimensional presentation.

21. (Currently Amended) A system, comprising:
- a schema builder that generates one or more virtual schemas including at least a portion of data input from a source, and generates mapping rules controlling data movement into a data warehouse;
 - a metadata repository operative to hold the virtual schemas and mapping rules;
 - a data warehouse builder;
 - a spatial-object data repository;
 - a region checker; and
 - an n-dimensional presentation;
- wherein the data warehouse is defined by at least a portion of the data input, the virtual schemas, the mapping rules, and the analysis functions; and
- wherein one or more indicators associated with one or more groupings determined from the at least a portion of data input from a source, based at least in part upon a spatial component of the data, are displayed on the n-dimensional presentation.
22. (Original) The system of claim 21 wherein the source comprises at least one of a plurality of on line transaction processing (OLTP) databases.
23. (Currently Amended) An apparatus, comprising:
- means for generating one or more virtual schemas including at least a portion of data input from a source;
 - means for generating mapping rules controlling data movement into a data warehouse;
 - means for holding the virtual schemas and mapping rules;
 - means for generating one or more analysis functions based upon the virtual schemas and data input; and

means for displaying one or more indicators associated with the one or more groupings, determined based at least in part upon a spatial component of the data, on an n-dimensional presentation.

24. (Canceled)

25. (Currently Amended) A computer program product, comprising:
code for accessing meta data from a repository;
code for translating entities from a meta model into a data schema to form a database;
code for providing customer activity correlation queries with access to a database of a data warehouse;
code for providing customer data analysis functions;
code for displaying analysis results to at least one of a plurality of business applications using one or more indicators associated with the one or more groupings, determined based at least in part upon a spatial component of data in the database, on an n-dimensional presentation;
and
a computer readable storage medium for holding the codes.

26. (Original) A customer data analysis report produced according to the method of claim 1.

27. (Previously Amended) The method of claim 1, wherein forming a virtual schema including at least a portion of a dataset included within the first database comprises:

providing a focal group, comprising:
at least one of a plurality of core components; and

at least one of a plurality of classification components providing classifications for information relating to the core components; and
providing at least one customized group, comprising:
at least one of a plurality of customer activity components related to the core component; and
at least one of a plurality of activity lookup components related to at least one of the customer activity components;
wherein the focal group and the customized group comprise a reverse star schema meta model.

28. (Previously Amended) A computer readable storage medium containing information organized into a focal group and at least one customized group according to the method of claim 27.

29. (Previously Added) The method of claim 1, wherein displaying one or more indicators associated with the one or more groupings on an n-dimensional presentation comprises:

overlaying the one or more indicators on a virtual world presentation.

30. (Currently Amended) A method, comprising:
receiving input data from a source;
determining at least one grouping of data from the source data based upon a virtual schema including at least a portion of the input data and aggregation according to a received criteria, wherein the at least one grouping of data is determined based at least in part upon a spatial component of the data; and
associating an indicator with the grouping of data for display of the indicator on an n-dimensional presentation.

31. (Previously Added) The method of claim 30, wherein associating an indicator with the grouping of data for display of the indicator on an n-dimensional presentation comprises:

displaying at least one indicator, the indicator indicating a location and density information determined from the source data.

32. (Previously Added) The method of claim 31, wherein displaying at least one indicator, the indicator indicating a location and density information determined from the source data comprises:

displaying a graphical depiction of the source data, wherein density information is indicated by the graphical depiction.

33. (Previously Added) The method of claim 32, wherein displaying a graphical depiction of the source data, wherein density information is indicated by the graphical depiction comprises:

displaying a bar graph depiction of the source data, wherein the bar graph indicates modifications in response to user input.

34. (Previously Added) The method of claim 33, wherein displaying a bar graph depiction of the source data, wherein the bar graph indicates modifications in response to user input comprises:

displaying at least one dot, right arrow, left arrow or word(s).

35. (Newly Added) The method of claim 1, wherein displaying one or more indicators associated with the one or more groupings on an n-dimensional presentation comprises:

overlaying the one or more indicators onto a cartograph.

36. (Newly Added) The method of claim 1, further comprising:

preparing an OLAP datacube based at least in part upon data from the first database; and overlaying the one or more indicators onto a cartograph in accordance with the datacube.